

# PLANS FOR THE CONSTRUCTION OF ROADWAY EDGE STABILIZATION FOR TUNNEL ROAD

FUNDED BY  
MEASURE B  
CITY PROJECT NO.: 1005104 TYP.



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THE CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT, THE CITY PUBLIC WORKS AGENCY, AND CALTRANS ELECTRICAL AT (510)622-5741 AT LEAST 48 HOURS (2 WORKING DAYS) PRIOR TO BEGINNING ANY EXCAVATION IN THE VICINITY OF UNDERGROUND FACILITIES.



**CITY OF OAKLAND**  
DEPARTMENT OF TRANSPORTATION  
250 FRANK H. OGAWA PLAZA  
SUITE 4314  
OAKLAND, CA 94612  
(510) 238-3437  
FAX (510) 238-7227

GREAT STREETS DELIVERY (DOT)

PRINCIPAL CIVIL ENGINEER

SAFE STREETS (DOT)

DIVISION MANAGER

ADA PROGRAMS (DOT)

DIVISION MANAGER

PROJECT DELIVERY DIVISION (OPW)

DIVISION MANAGER

BUREAU OF MAINTENANCE AND INTERNAL SERVICES (OPW)

ASSISTANT DIRECTOR

BUREAU OF ENVIRONMENT (OPW)

ASSISTANT DIRECTOR

Jeff Roublos  
STRUCTURES AND EMERGENCY RESPONSE

SUPERVISING CIVIL ENGINEER

CHECKED BY **KL**

DESIGNED BY **ES**

DRAWN BY **AK**

No.	BY	DATE	REFERENCE
1	ES	03/07/24	GRADING REVISIONS

PROJECT NO.

**1005104**

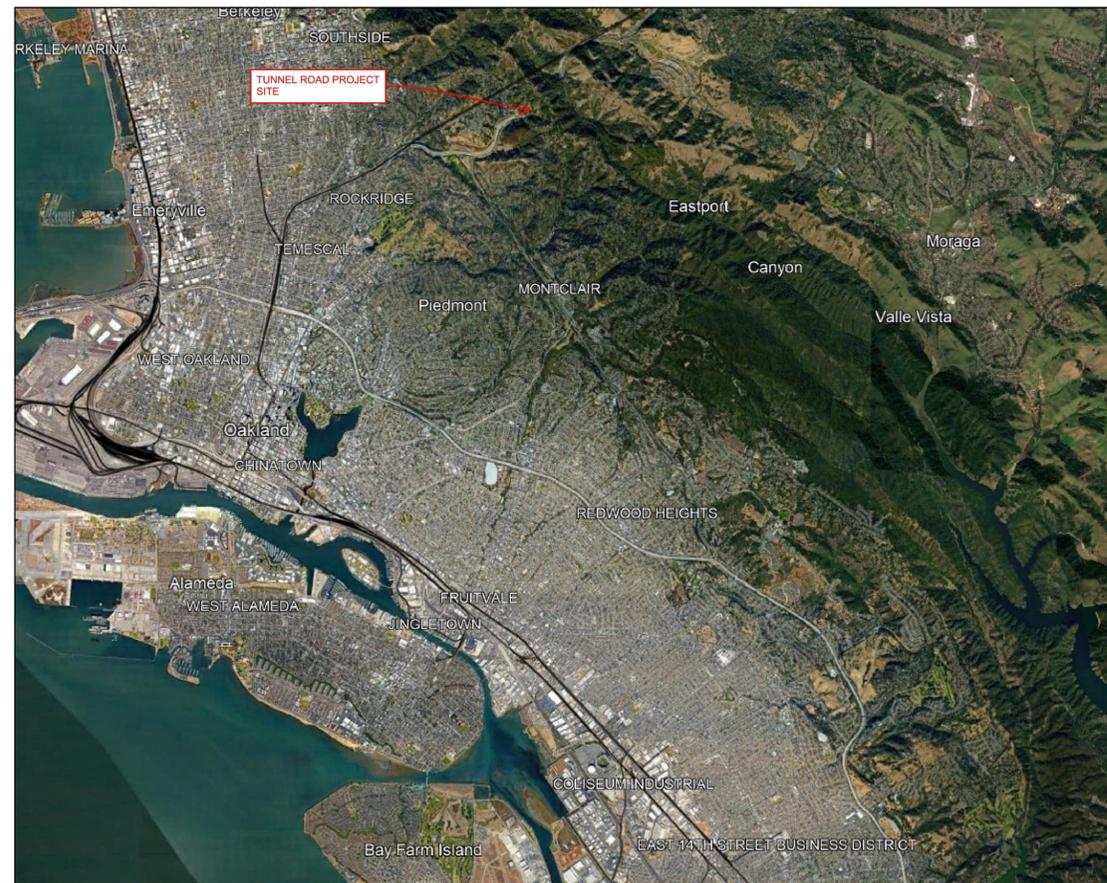
SCALE: **NTS**

DATE: **05/26/2023**

SHEET NO. **T-01**

**1** OF **15**

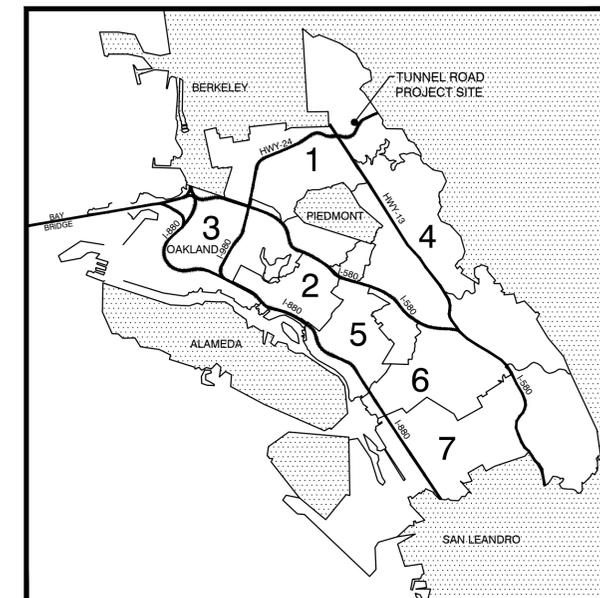
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**VICINITY MAP**

NOT TO SCALE

PROJECT LOCATION		
PROJECT SITE	APPROXIMATE COORDINATES (VIA GOOGLE MAPS)	NEAREST ADDRESS
TUNNEL ROAD	37.85616, -122.21565	1 BAY FOREST PLACE, OAKLAND, CA



**CITY OF OAKLAND  
COUNCIL DISTRICT MAP**

MEGAN WEIR  
ASSISTANT DIRECTOR  
DEPARTMENT OF TRANSPORTATION

**AGS, INC.**  
CONSULTING ENGINEERS  
5 FREELON STREET, SAN FRANCISCO, CA 94107  
PHONE: (415) 777-2166 · FAX: (415) 777-4874

DRAWING NAME: Z:\AGS\project\2018\18-003 city of oakland various on-call\proj\1\_CAD\TRG\_SHEETS\TR-T-01.dwg  
PLOT DATE: 06-11-24  
PLOTTED BY: arto-hirschner

**NOTES:**

- ALL WORK, MATERIAL AND EQUIPMENT SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION 2021 EDITION, THE CITY OF OAKLAND STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION 2002 EDITION, THE APPLICABLE CALIFORNIA DEPARTMENT OF TRANSPORTATION (CALTRANS) 2022 STANDARD SPECIFICATIONS AND 2022 STANDARD AND REVISED STANDARD PLANS, THE CURRENT CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND THE PROJECT SPECIAL PROVISIONS.
- IN ACCORDANCE WITH SPECIFICATIONS SECTION 7-9, THE CONTRACTOR SHALL REPAIR OR REPLACE ALL EXISTING IMPROVEMENTS DAMAGED OR REMOVED AS A RESULT OF CONSTRUCTION OPERATIONS. IN ADDITION, ANY EXISTING STATE FACILITIES DAMAGED AND/OR REMOVED AS A RESULT OF CONSTRUCTION OPERATIONS SHALL BE REPAIRED AND/OR REPLACED IN-KIND BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE AND NO ADDITIONAL PAYMENT SHALL BE MADE.
- THE CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT (USA) AT (800) 227-2600 AT LEAST TWO (2) WORKING DAYS PRIOR TO CONSTRUCTION AND REQUEST DELINEATION OF UNDERGROUND UTILITIES IN THE AREA TO BE EXCAVATED. NOTE THAT MARKINGS ARE ONLY VALID FOR FOURTEEN (14) DAYS. IF THE MOST RECENT REQUEST HAS ELAPSED THE 14-DAY PERIOD, THE CONTRACTOR NEEDS TO REQUEST USA TO RENEW MARKINGS.
- THE LOCATION AND SIZE OF MAJOR UNDERGROUND FACILITIES AND UTILITIES SHOWN HEREON ARE SCHEMATIC IN NATURE, USING INFORMATION FURNISHED BY THE RESPECTIVE OWNER AGENCIES. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL DATA WITH THE RESPECTIVE AGENCIES AND TAKING PROPER PRECAUTIONS TO PROTECT AND AVOID THE EXISTING FACILITIES AND UTILITIES. DAMAGE TO UTILITY LINES WILL BE REPAIRED BY THE RESPECTIVE AGENCY AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL NOT ALLOW DEBRIS AND SILT GENERATED BY CONSTRUCTION ACTIVITIES TO FLOW INTO THE PUBLIC STORM DRAIN SYSTEM NOR TO BE DEPOSITED IN THE PUBLIC RIGHT OF WAY, AS SPECIFIED IN SECTION 7-8.6 OF THE SPECIAL PROVISIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING SUCH SILT MATERIAL FROM THE JOB SITE. FULL COMPENSATION TO FULFILL THIS WORK SHALL BE INCLUDED IN THE PRICE FOR THE VARIOUS ITEMS OF WORK, AND NO ADDITIONAL PAYMENT WILL BE ALLOWED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL WORK TO BE PERFORMED BY HIS/HER SUBCONTRACTORS, INCLUDING TRAFFIC CONTROL WORK, CONCRETE CONSTRUCTION, AND OTHERS.
- THE CONTRACTOR SHALL PROVIDE TWO (2) SETS OF AS-BUILTS TO THE RESIDENT ENGINEER PRIOR TO FINAL PAYMENTS.
- CONTRACTOR IS RESPONSIBLE FOR TAKING NECESSARY PRECAUTIONS TO ENSURE PEDESTRIAN SAFETY, INCLUDING APPROPRIATE SIGNAGE AND BARRICADES.
- CONTRACTOR IS RESPONSIBLE FOR RESTORING ALL UTILITY BOXES AFFECTED BY WORK TO ITS ORIGINAL STATE.
- CONTRACTOR SHALL ADJUST TO FINISHED GRADE ALL AFFECTED MANHOLES, STREET MONUMENTS, WATER VALVE(S), GAS VALVE(S), UTILITY BOX(ES), CLEANOUT FRAMES, AND COVERS UNLESS OTHERWISE DIRECTED BY ENGINEER.
- ALL EXISTING SIGNS ARE TO REMAIN UNLESS SPECIFICALLY DESIGNATED TO BE REMOVED, SALVAGED, OR RELOCATED. REMOVED SIGNS TO BE SALVAGED SHALL BE STORED AT THE CITY OF OAKLAND MAINTENANCE YARD LOCATED AT 7200 EDGEWATER DRIVE. THE CONTRACTOR SHALL RESTORE ALL THE EXISTING SIGNS. THE COST FOR THIS WORK SHALL BE INCLUDED IN THE PRICE FOR THE VARIOUS WORK ITEMS AND NO ADDITIONAL PAYMENT SHALL BE MADE.
- UNLESS OTHERWISE NOTED, ELEVATION OF EXISTING SURFACE AT CONFORM SHOWN IS APPROXIMATE. CONTRACTOR SHALL COORDINATE WITH THE RESIDENT ENGINEER TO FINALIZE GEOMETRY AT CONFORM PRIOR TO CONSTRUCTION IN THE CONFORM AREAS.
- THE CONTRACTOR SHALL CALL THE CITY OF OAKLAND ELECTRICAL DEPARTMENT AT (510) 615-5438 AND THE OFFICE OF INFORMATION TECHNOLOGIES AT (510) 238-2996 AT LEAST FIVE WORKING DAYS PRIOR TO STARTING WORK FOR FIELD MARKING OF ALL CITY ELECTRICAL AND FIRE ALARM FACILITIES. REFER TO 7-9 FOR SPECIAL REQUIREMENTS REGARDING DAMAGE TO CITY ELECTRICAL FACILITIES DURING CONSTRUCTION.

- EXISTING CITY AND STATE MONUMENTS SHALL NOT BE DISTURBED. IF A MONUMENT IS TO BE DISTURBED, THE CONTRACTOR MUST FIRST OBTAIN WRITTEN PERMISSION FROM THE CITY SURVEYOR. THERE IS A \$5,000 FEE PER MONUMENT FOR WHICH SUCH PERMISSION IS NOT OBTAINED. THIS FEE SHALL BE DEDUCTED FROM THE FOLLOWING PROGRESS PAYMENT. ANY MONUMENTS TO REMAIN THAT ARE ACCIDENTALLY DISTURBED BY THE CONTRACTOR SHALL BE REPLACED BY A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF CALIFORNIA, AND A RECORD OR SURVEY SHALL BE PREPARED AND FILED. THE REPLACEMENT OR RELOCATION OF THESE SURVEY MONUMENTS MUST BE COORDINATED WITH THE CITY SURVEYOR. THE REPLACEMENT OR RELOCATION OF THESE MONUMENTS SHALL BE AT NO ADDITIONAL COST TO THE CITY. STATE LAW ALLOWS/REQUIRES WITHHOLDING OF THE FILING OF ANY NOTICE OF COMPLETION UNTIL ALL MATTERS INVOLVING CITY MONUMENTS. REFER TO SECTION 2-9 OF THE PROJECT SPECIFICATIONS.
- THE CONTRACTOR SHALL COMPLY WITH SECTION 8771 OF THE CALIFORNIA BUSINESS AND PROFESSIONS CODE REGARDING THE REPLACEMENT OF MONUMENTS DESTROYED DURING CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING ANY SURVEY MONUMENTS WITHIN THE PROJECT LIMITS.
- THE CONTRACTOR SHALL COORDINATE WITH THE RESPECTIVE UTILITY COMPANIES TO RESTORE OR ADJUST GRADES OF UTILITY BOXES, VALVES, AND FIRE HYDRANT, ETC. THIS IS PART OF THE CONSTRUCTION WORK, AND NO ADDITIONAL PAYMENT SHALL BE MADE.
- THE ELEVATION REFERENCE FOR THIS SURVEY IS A OAKLAND CITY BENCHMARK, BM 855, PIN MONUMENT LOCATED AT OPPOSITE LOT 12 OF GWIN UNIT, NORTHERLY OF INTERSECTION OF BUCKINGHAM BOULEVARD AND TUNNEL ROAD. ELEVATION= 902.295 FEET NGVD 29. THE PARCEL LINES SHOWN HEREON ARE BASED UPON RECORD INFORMATION AS SHOWN ON THAT CERTAIN TRACT MAP NO. 4080, FILED IN BOOK 112 OF MAPS, PAGE 47-49. FILE NO. 79-14249, ALAMEDA COUNTY RECORDS, DATED JULY 20, 1979.
- CONTRACTOR SHALL FOLLOW TREE REMOVAL AND PRUNING PER THE CITY OF OAKLAND REQUIREMENTS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR TRAFFIC CONTROL AND STAGING, INCLUDING OBTAINING REQUIRED PERMITS FOR THIS EFFORT, TO FOLLOW ALL REQUIREMENTS, SCHEDULES, AND REGULATIONS FOR LANE CLOSURES AND FOR WORK IN THE ROADWAY. A TEMPORARY TRAFFIC CONTROL PLAN (TCP) SHALL BE PREPARED, SIGNED, AND STAMPED BY A LICENSED ENGINEER. THE TCP SHALL BE PAID FOR AS PART OF THE TRAFFIC CONTROL AND PLAN PREPARATION BID ITEM.
- THE CONTRACTOR SHALL PROVIDE A WORKING PAD IN AREAS WITH SOFT SUBGRADE BY PLACING GEOGRID AND ROCK, WHERE NECESSARY. THE COST OF THE WORK SHALL BE INCLUDED AS A SEPARATE LINE ITEM PRICE TO BE USED ONLY IF THE WORKING PAD BECOMES NECESSARY. NO ADDITIONAL PAYMENT SHALL BE MADE.
- THE CONTRACTOR SHALL PLACE FILL ON A DRY SUBGRADE. THE CONTRACTOR SHALL BE READY TO DEWATER THE WORK AREA, IF NECESSARY. A WRITTEN PLAN FOR DEWATERING, AS SPECIFIED IN THE STANDARD PROVISIONS SECTION 7.8.4, SHALL BE PREPARED, SIGNED AND STAMPED BY A LICENSED ENGINEER. THE DEWATERING PLAN SHALL BE SUBMITTED FOR REVIEW AND APPROVAL BY THE CITY. THE DEWATERING SHALL CONTINUE UNTIL OVERBURDEN WEIGHT IS HIGHER THAN UPLIFT PRESSURE. THE COST FOR THE DEWATERING SHALL BE INCLUDED AS A SEPARATE LINE-ITEM PRICE. THE COST SHALL BE BASED ON DEWATERING LOCALLY WITH APPROPRIATE MEASURES IN PLACE TO ENSURE THE DISCHARGE DOES NOT KICK UP SEDIMENT OR ERODE THE LOCAL ENVIRONMENT. DEWATERING CANNOT BE DISCHARGED DIRECTLY TO THE CREEK, BUT COULD DISCHARGE TO THE BANK SLOPE AWAY FROM THE WORK AREA USING SIMILAR PRECAUTIONS TO PREVENT SEDIMENTATION AND EROSION. THE CITY'S APPROVAL OF THE CONTRACTOR'S DEWATERING PLAN DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY FOR THE ADEQUACY OF THE DEWATERING SYSTEM TO ACHIEVE THE SPECIFIED RESULT. NO ADDITIONAL PAYMENT SHALL BE MADE.
- THE CITY OF OAKLAND GRADING MORATORIUM (WET WEATHER SEASON) IS IN EFFECT BETWEEN OCTOBER 15 AND APRIL 15TH. NO GRADING OPERATIONS ARE ALLOWED DURING THIS TIME.
- CONTRACTOR TO REFER TO PROJECT PERMITS FOR REQUIREMENTS AND PERMITTED WORKING WINDOWS THROUGHOUT THE YEAR.

**ABBREVIATIONS:**

AB	AGGREGATE BASE	N	NORTH/NORTHINGS
ABN	ABANDON	NA	NOT APPLICABLE
AC	ASPHALT CONCRETE	NF	NOT FOUND
APPROX	APPROXIMATE	NIC	NOT IN CONTRACT
AT&T	AT&T TELECOMMUNICATION	NTS	NOT TO SCALE
BW/BWK	BACK OF WALK	NO	NUMBER
CB	CATCH BASIN	(N)	NEW
CI	CAST IRON	OC	ON CENTER
CIPP	CURED-IN-PLACE PIPE	OD	OUTSIDE DIAMETER
CIR	CIRCLE	PAV	PAVEMENT/PAVING
CL/CL	CENTERLINE	PG&E	PACIFIC GAS & ELECTRIC
CO	CLEANOUT	PL	PROPERTY LINE
CONC	CONCRETE	PROP	PROPOSED
CONT	CONTINUE	PVC	POLYVINYL CHLORIDE PIPE
CMP	CORRUGATED METAL PIPE	PVT	PRIVATE
CPP	CORRUGATED PRESSURE PIPE	RCP	REINFORCED CONCRETE PIPE
DC	DROP CONNECTION	RT	RIGHT
DI	DRAINAGE INLET	RD	ROAD
DIA	DIAMETER	R/W	RIGHT-OF-WAY
DIP	DUCTILE IRON PIPE	RW	RETAINING WALL
DOE	DEPTH OF EXCAVATION	S	SLOPE/SOUTH
DR	DRIVE	SCH	SCHEDULE
DWG	DRAWING	SD	STORM DRAIN
DWY	DRIVEWAY	SDMH	STORM DRAIN MANHOLE
E	ELECTRIC/EAST/EASTINGS	SS	SANITARY SEWER
EG	EXISTING GRADE	SSD	SEE STRUCTURAL DRAWINGS
EP	END POINT/EDGE OF PAVEMENT	SPECS	STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 2009 EDITION
EQ	EQUAL	SP	SPECIAL PROVISIONS
ETC	ET CETERA	SL	STREET LIGHT
EX	EXISTING	ST	STREET
EBMUD	EAST BAY MUNICIPAL UTILITY DISTRICT	STL	STEEL
EL	ELEVATION	SD	STORM DRAIN
EP	EDGE OF PAVEMENT	SS	SANITARY SEWER
FG	FINISHED GRADE	STR	STRUCTURE
FH	FIRE HYDRANT	T/TEL	TELEPHONE
FL	FLOWLINE	TC	TOP OF CURB
FS	FINISHED SURFACE	TOW	TOP OF WALL
FT	FEET	TP	TOP OF PAVEMENT
G	GAS LINE/CUTTER	TV	TELEVISION
GB	GRADE BREAK	TYP	TYPICAL
GND	GROUND	UG	UNDERGROUND
GV	GAS VALVE	VCP	VITRIFIED CLAY PIPE
HDPE	HIGH DENSITY POLYETHYLENE	W	WATER/WEST
HYD	FIRE HYDRANT	WV	WATER VALVE
ID	INSIDE DIAMETER		
INL	INLET		
INV	INVERT		
IP	IRON PIPE		
JP	JOINT POLE		
LF	LINEAR FEET		
LH	LAMPHOLE		
LAT	LATERAL		
LT	LEFT		
L	LENGTH		
MH	MANHOLE		
MAX	MAXIMUM		
MIN	MINIMUM		
MON	MONUMENT		



Know what's below.  
Call before you dig.

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**ROADWAY EDGE STABILIZATION FOR TUNNEL ROAD**



**CITY OF OAKLAND**  
DEPARTMENT OF TRANSPORTATION  
250 FRANK H. OGAWA PLAZA, SUITE 4314 • OAKLAND CA, 94612  
(510) 238-3437 • FAX (510) 238-7227

**AGS, Inc.**  
CONSULTING ENGINEERS  
5 FREELON STREET  
SAN FRANCISCO, CA 94107  
PHONE: (415) 777-2166  
FAX: (415) 777-4874



CIVIL ENGINEER	NO.	DATE	BY	REFERENCE
<b>ERIK SCHELLER</b>				
RCE NO. <b>C58638</b>				
CHECKED BY <b>KL</b>				
DESIGNED BY <b>ES</b>				
DRAWN BY <b>AEK</b>				

**NOTES AND ABBREVIATIONS**

PROJECT NO.	
<b>1005104</b>	
SCALE:	SHEET NO.
<b>NONE</b>	<b>N-01</b>
DATE:	OF
<b>04/01/2024</b>	<b>02 OF 15</b>

DRAWING NAME: Z:\AGS\project\001\001\001\18-003 city of oakland various on call geo\9\_Prodt\_CAD\TRG\_SHEETS\TRN-N-01.dwg  
PLOT DATE: 06-11-24  
PLOTTED BY: arto.linsinger

# LEGENDS

- WTR — EX WATER LINE
- UNK — EX UNKNOWN UTILITY LINE
- E — EX ELECTRIC LINE
- SD — EX STORM DRAIN LINE
- SS — EX SANITARY SEWER LINE
- CMN — EX COMMUNICATION LINE
- ☒ EX UTILITY VAULT OR METER
- ⊗ EX WATER VALVE
- EX MANHOLE STRUCTURE
- EX CLEAN OUT
- ⊕ EX FIRE HYDRANT
- ▩ EX DRAINAGE STRUCTURE
- ⊕ EX MONUMENT
- ⊥ SOLDIER PILE
- (N)CATCHBASIN
- ▨ NATIVE MATERIAL TO BE EXCAVATED
- ▩ PAVEMENT TO BE DEMOLISHED/SAWCUT
- AC PAVEMENT, MATCH (E)PAVING SECTION
- ▨ AC SAWCUT
- ▩ RIPRAP
- LIMIT OF WORK LINE
- - - (E)PROPERTY LINE
- - - (E)EASEMENT
- - - SILT/DUST FENCE
- ⊖ STRAW WATTLE/FIBER ROLL

0.00  
XXXX — EXISTING  
ELEVATION  
DESCRIPTION

0.00  
XX" TREE — EX TREE

XX 000.0 — POPOSED ELEVATION

## SECTION AND DETAIL

DETAIL  
1" = 3" (2/9) — DETAIL  
NO. / PAGE  
NO.

SECTION  
1" = 5" (B/3) — DETAIL  
NAME / PAGE  
NO.

(A/9) — DETAIL  
NAME / PAGE  
NO.  
SECTION

ROADWAY EDGE STABILIZATION FOR  
TUNNEL ROAD



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NO.	DATE	BY	REFERENCE

LEGEND AND SYMBOLS

PROJECT NO.  
**1005104**  
SCALE: **NTS** SHEET NO. **N-02**  
DATE: **04/01/2024** **03** OF **15**

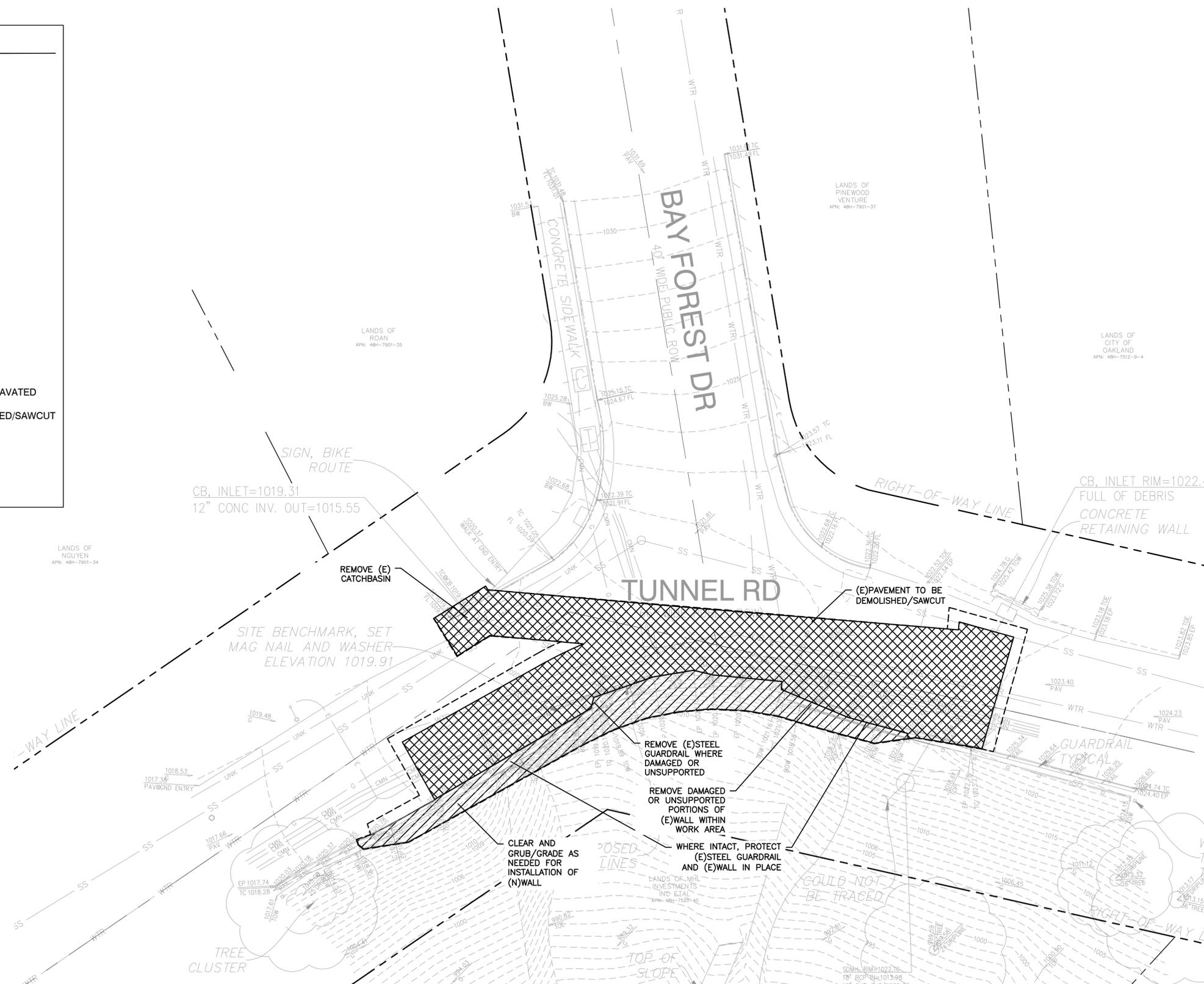
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CIVIL ENGINEER  
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DESIGNED BY **ES**  
DRAWN BY **AEK**

NO.	DATE	BY	REFERENCE

**TUNNEL ROAD EXISTING CONDITIONS AND DEMOLITION PLAN**

PROJECT NO.  
**1005104**

SCALE:  
**1" = 10'**

DATE:  
**04/01/2024**

SHEET NO.  
**C-01**  
04 OF 15

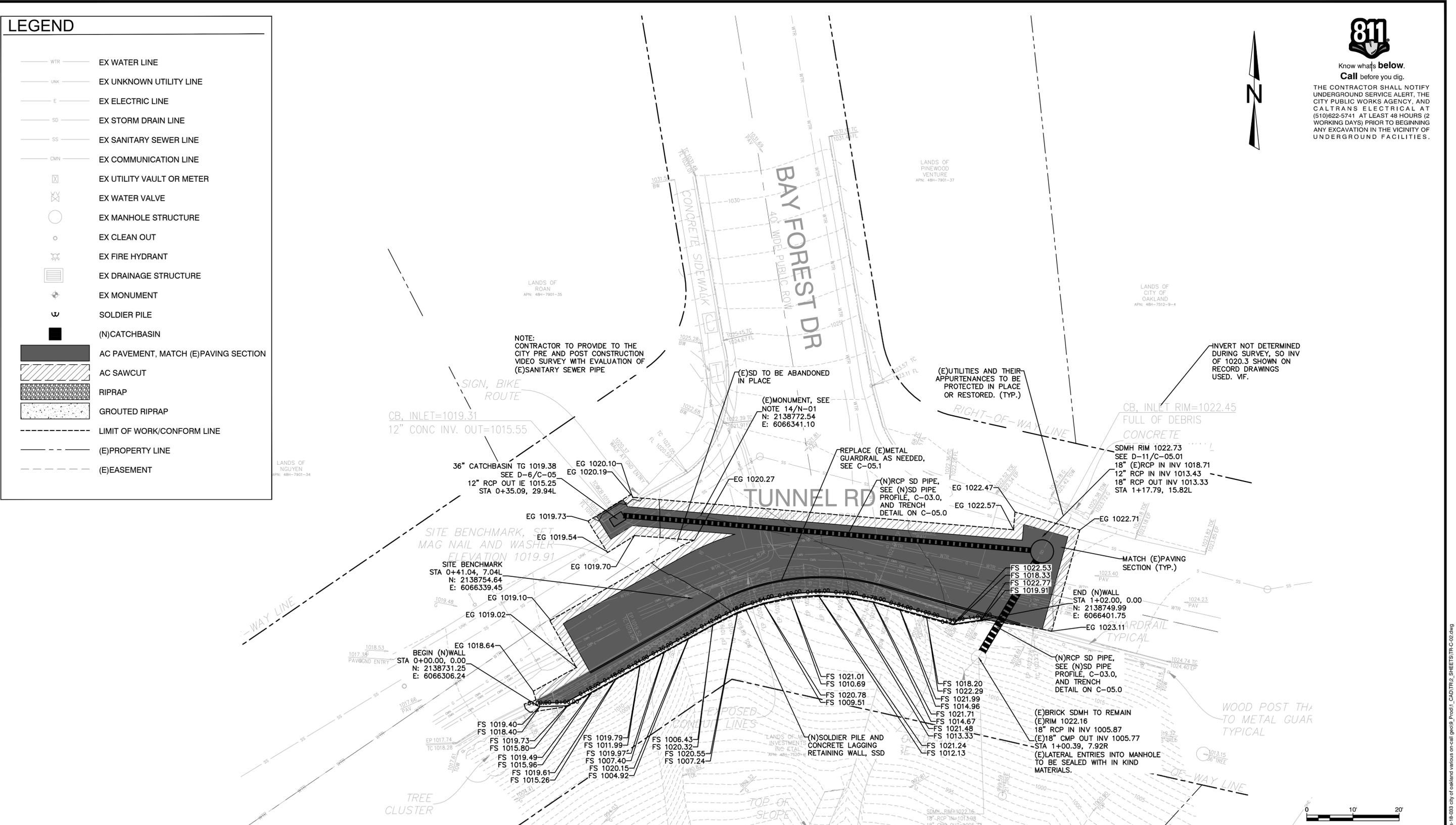
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PLOTTED BY: arto@irschner.com

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- ▨ AC SAWCUT
- ▨ RIPRAP
- ▨ GROUTED RIPRAP
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**TUNNEL ROAD GRADING AND DRAINAGE PLAN**

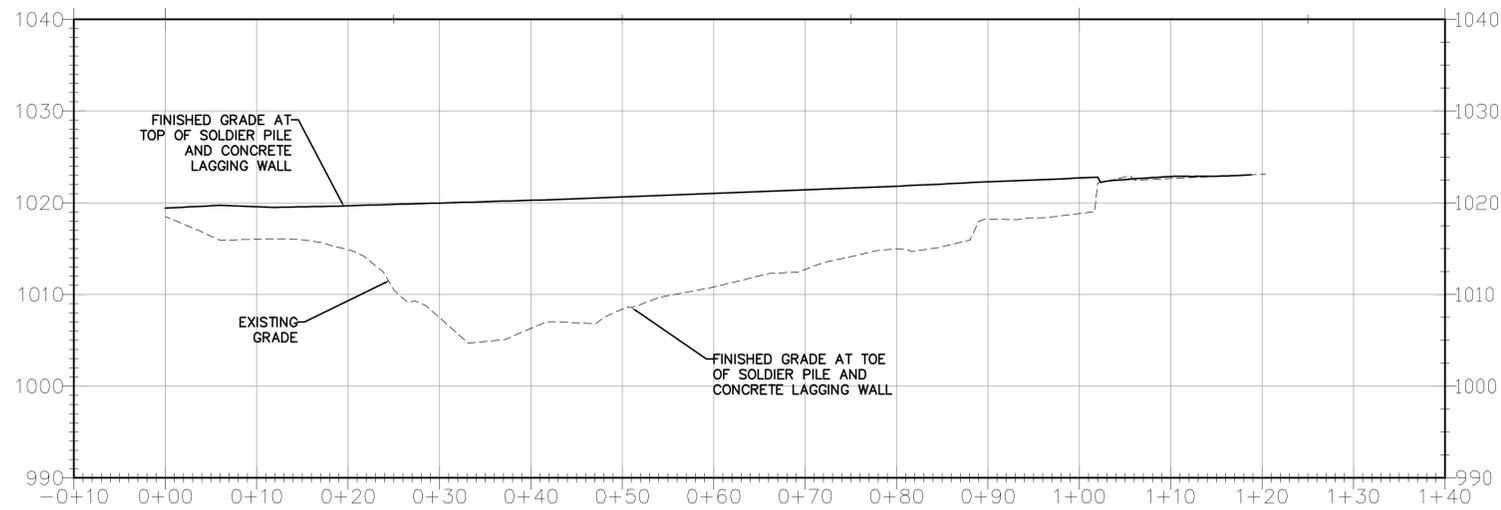
PROJECT NO.  
**1005104**  
 SCALE:  
**1" = 10'**  
 SHEET NO.  
**C-02**  
 DATE:  
**04/01/2024**  
**05 OF 15**

DRAWING NAME: Z:\AGS\project\10104\18-003 city of oakland various on-call group\_Produ1\_CAD\TRC\_SHEETS\TRC-02.dwg  
 PLOT DATE: 06-11-24  
 PLOTTED BY: arnold.mischer

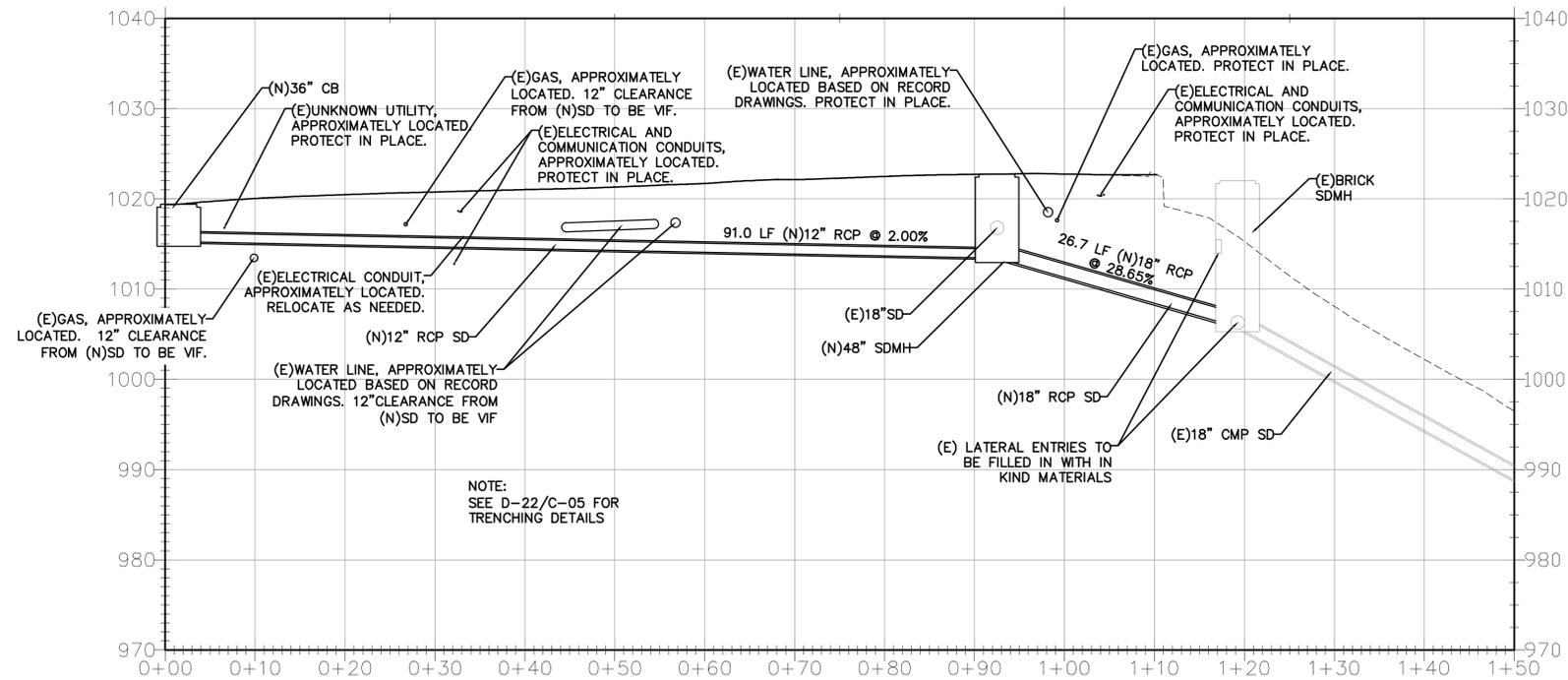


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(N)RETAINING WALL



(N)SD Pipe Profile



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DESIGNED BY ES

DRAWN BY AEK

NO.	DATE	BY	REFERENCE

TUNNEL ROAD CIVIL  
PROFILES

PROJECT NO.

1005104

SCALE:  
1" = 10'

SHEET NO.  
C-03.0

DATE:  
04/01/2024

06 OF 15

DRAWING NAME: Z:\AGS\project\01\trags\18-003 city of oakland various on call geo\9\_Profil\_CAD\TRG\_SHEETS\TRC-02.dwg  
PLOT DATE: 06-11-24  
PLOTTED BY: arto.kirschner

**LEGENDS**

- WTR — EX WATER LINE
- E — EX ELECTRIC LINE
- SD — EX STORM DRAIN LINE
- SS — EX SANITARY SEWER LINE
- CMN — EX COMMUNICATION LINE
- ⊠ EX UTILITY VAULT OR METER
- ⊗ EX WATER VALVE
- EX MANHOLE STRUCTURE
- EX CLEAN OUT
- ⊗ EX FIRE HYDRANT
- ▤ EX DRAINAGE STRUCTURE
- ⊕ EX MONUMENT
- ⊃ SOLDIER PILE
- (N)CATCHBASIN
- - - - - LIMIT OF WORK LINE
- - - - - (E)PROPERTY LINE
- - - - - (E)EASEMENT
- - - - - SILT/DUST FENCE
- ⊖⊖⊖⊖⊖ STRAW WATTLE/FIBER ROLL

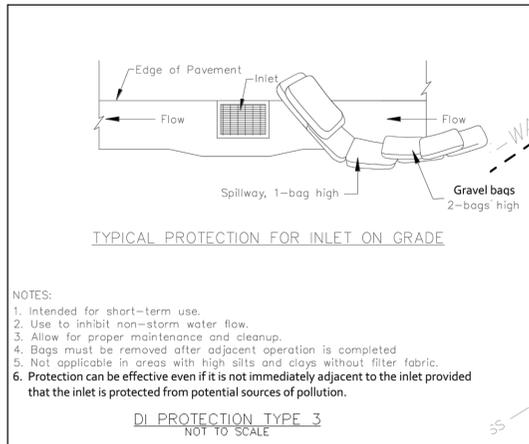


Know what's below.  
Call before you dig.

THE CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT, THE CITY PUBLIC WORKS AGENCY, AND CALTRANS ELECTRICAL AT (510)622-5741 AT LEAST 48 HOURS (2 WORKING DAYS) PRIOR TO BEGINNING ANY EXCAVATION IN THE VICINITY OF UNDERGROUND FACILITIES.



NOTE:  
CONTRACTOR RESPONSIBLE, PRIOR AND DURING CONSTRUCTION, TO PROVIDE PHASED SEDIMENT AND EROSION CONTROL PLANS, WHICH WOULD INCLUDE SEDIMENT AND EROSION CONTROL MEASURES AS WELL AS LOCATIONS OF STORAGE, PARKING, STAGING, PORTABLE TOILETS, ETC.



**ROADWAY EDGE STABILIZATION FOR TUNNEL ROAD**



**CITY OF OAKLAND**  
DEPARTMENT OF TRANSPORTATION  
250 FRANK H. OGAWA PLAZA, SUITE 4314 • OAKLAND CA, 94612  
(510) 238-3437 • FAX (510) 238-7227

**AGS, INC.**  
CONSULTING ENGINEERS  
5 FREELON STREET  
SAN FRANCISCO, CA 94107  
PHONE: (415) 777-2166  
FAX: (415) 777-4874

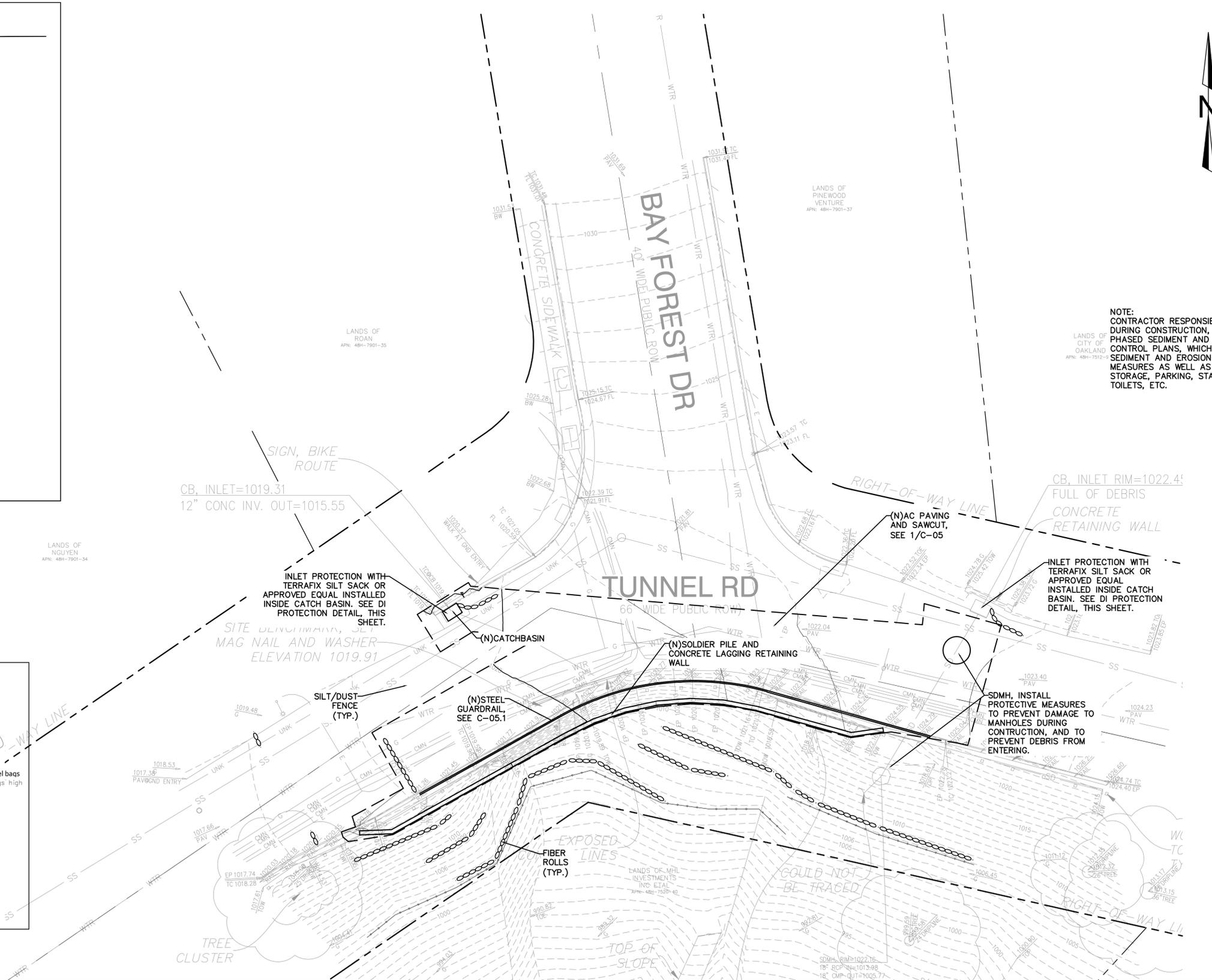


CIVIL ENGINEER  
**ERIK SCHELLER**  
RCE NO. **C58638**  
CHECKED BY **KL**  
DESIGNED BY **ES**  
DRAWN BY **AEK**

NO.	DATE	BY	REFERENCE

**TUNNEL ROAD EROSION AND SEDIMENT CONTROL PLAN**

PROJECT NO.  
**1005104**  
SCALE: 1" = 10'  
DATE: 04/01/2024  
SHEET NO.  
**C-04**  
07 OF 15



DRAWING NAME: Z:\AGS\project\1005104\1005104.dwg; PLOT DATE: 06-11-24; PLOTTED BY: arto@irschner.com

# Pollution Prevention - It's Part of the Plan



## Make sure your crews and subs do the right job!

Runoff from streets and other paved areas is a major source of pollution and damage to creeks and the San Francisco Bay. Construction activities can directly affect the health of creeks and the Bay unless contractors and crews plan ahead to keep dirt, debris, and other construction waste away from storm drains and local creeks. Following these guidelines and the project specifications will ensure your compliance with City of Oakland requirements.

### Materials storage & spill cleanup

#### Non-hazardous materials management

- Sand, dirt, and similar materials must be stored at least 10 feet (3 meters) from catch basins. All construction material must be covered with a tarp and contained with a perimeter control during wet weather or when rain is forecasted or when not actively being used within 14 days.
- Use (but don't overuse) reclaimed water for dust control as needed.
- Sweep or vacuum streets and other paved areas daily. Do not wash down streets or work areas with water.
- Recycle all asphalt, concrete, and aggregate base material from demolition activities. Comply with City of Oakland Ordinances for recycling construction materials, wood, gyp board, pipe, etc.
- Check dumpsters regularly for leaks and to make sure they are not overfilled. Repair or replace leaking dumpsters promptly.
- Cover all dumpsters with a tarp at the end of every work day or during wet weather.

#### Hazardous materials management

- Label all hazardous materials and hazardous wastes (such as pesticides, paints, thinners, solvents, fuel, oil, and antifreeze) in accordance with city, county, state, and federal regulations.
- Store hazardous materials and wastes in water tight containers, store in appropriate secondary containment, and cover them at the end of every work day or during wet weather or when rain is forecasted.
- Follow manufacturer's application instructions for hazardous materials and be careful not to use more than necessary. Do not apply chemicals outdoors when rain is forecasted within 24 hours.
- Be sure to arrange for appropriate disposal of all hazardous wastes.

#### Spill prevention and control

- Keep a stockpile of spill cleanup materials (rags, absorbents, etc.) available at the construction site at all times.
- When spills or leaks occur, contain them immediately and be particularly careful to prevent leaks and spills from reaching the gutter, street, or storm drain.
- Never wash spilled material into a gutter, street, storm drain, or creek!
- Dispose of all containment and cleanup materials properly.
- Report any hazardous materials spills immediately! Dial 911 or City of Oakland Public Works Hotline at (510)615-5566

#### Construction Entrances and Perimeter

- Establish and maintain effective perimeter controls and stabilize all construction entrances and exits to sufficiently control erosion and sediment discharges from site and tracking off site.
- Sweep or vacuum any street tracking immediately and secure sediment source etc prevent further tracking.

### Vehicle and equipment maintenance & cleaning

- Inspect vehicles and equipment for leaks frequently. Use drip pans to catch leaks until repairs are made; repair leaks promptly.
- Fuel and maintain vehicles on site only in a bermed area or over a drip pan that is big enough to prevent runoff.
- If you must clean vehicles or equipment on site, clean with water only in a bermed area that will not allow rinse water to run into gutters, streets, storm drains, or creeks.
- Do not clean vehicles or equipment on-site using soaps, solvents, degreasers, steam cleaning equipment, etc



### Earthwork & contaminated soils

- Keep excavated soil on the site where it will not collect in the street.
- Transfer to dump trucks should take place on the site, not in the street.
- Use fiber rolls, silt fences, or other control measures to minimize the flow of silt off the site.
- Earth moving activities are only allowed during dry weather by permit and as approved by the City of Oakland in the Field.
- Mature vegetation is the best form of erosion control. Minimize disturbance to existing vegetation whenever possible.
- If you disturb a slope during construction, prevent erosion by securing the soil with erosion control fabric, or seed with fast-growing grasses as soon as possible. Place fiber rolls down-slope until soil is secure.
- If you suspect contamination (from site history, discoloration, odor, texture, abandoned underground tanks or pipes, or buried debris), call the Engineer for help in determining what should be done, and manage disposal of contaminated soil according to their instructions.



### Dewatering operations

- Effectively manage all run-on, all runoff within the site, and all runoff that discharges from the site. Run-on from off site shall be directed away from all disturbed areas or shall collectively be in compliance.
- Reuse water for dust control, irrigation, or another on-site purpose to the greatest extent possible.
- Be sure to notify and obtain approval from the Engineer before discharging water to a street, gutter, or storm drain. Filtration or diversion through a basin, tank, or sediment trap may be required.
- In areas of known contamination, testing is required prior to reuse or discharge of groundwater. Consult with the Engineer to determine what testing is required and how to interpret results. Contaminated groundwater must be treated or hauled off-site for proper disposal.



### Saw Cutting

- Always completely cover or barricade storm drain inlets when saw cutting. Use filter fabric, catch basin inlet filters, or sand/gravel bags to keep slurry out of the storm drain system.
- Shovel, absorb, or vacuum saw-cut slurry and pick up all waste as soon as you are finished in one location or at the end of each work day (whichever is sooner!).
- If saw cut slurry enters a catch basin, clean it up immediately.



### Paving/Asphalt Work

- Always cover storm drain inlets and manholes when paving or applying seal coat, tack coat, slurry seal, or fog seal.
- Protect gutters, ditches, and drainage courses with sand/gravel bags, or earthen berms.
- Do not sweep or wash down excess sand from sand sealing into gutters, storm drains, or

- creeks. Collect sand and return it to the stockpile, or dispose of it as trash.
- Do not use water to wash down fresh asphalt concrete pavement.



### Concrete, grout, and mortar storage & waste disposal

- Store concrete, grout, and mortar under cover, on pallets, and away from drainage areas. These materials must never reach a storm drain.
- Wash out concrete equipment/trucks off-site or into contained washout areas that will not allow discharge of wash water onto the underlying soil or onto the surrounding areas.
- Collect the wash water from washing exposed aggregate concrete and remove it for appropriate disposal off site.



### Painting

- Never rinse paint brushes or materials in a gutter or street!
- Paint out excess water-based paint before rinsing brushes, rollers, or containers in a sink.
- Paint out excess oil-based paint before cleaning brushes in thinner.
- Filter paint thinners and solvents for reuse whenever possible. Dispose of oil-based paint sludge and unusable thinner as hazardous waste.

### Landscape Materials

- Contain, cover, and store on pallets all stockpiled landscape materials (mulch, compost, fertilizers, etc.) during wet weather or when rain is forecasted or when not actively being used within 14 days.
- Discontinue the application of any erodible landscape material within 2 days of forecasted rain and during wet weather.

ROADWAY EDGE STABILIZATION FOR  
TUNNEL ROAD



CITY OF OAKLAND

DEPARTMENT OF TRANSPORTATION  
250 FRANK H. OGAWA PLAZA, SUITE 4314 • OAKLAND CA, 94612  
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**AGS, INC.**  
CONSULTING ENGINEERS  
5 FREELON STREET  
SAN FRANCISCO, CA 94107  
PHONE: (415) 777-2166  
FAX: (415) 777-4874



CIVIL ENGINEER  
ERIK SCHELLER

RCE NO. C58638

CHECKED BY KL

DESIGNED BY ES

DRAWN BY AEK

NO.	DATE	BY	REFERENCE

EROSION CONTROL NOTES

PROJECT NO.

1005104

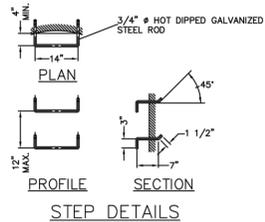
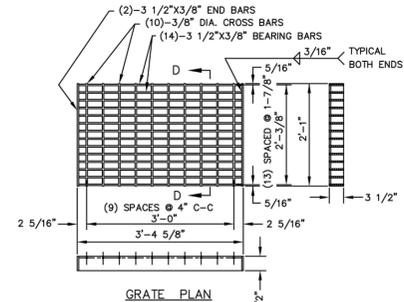
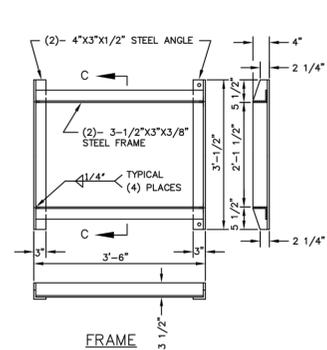
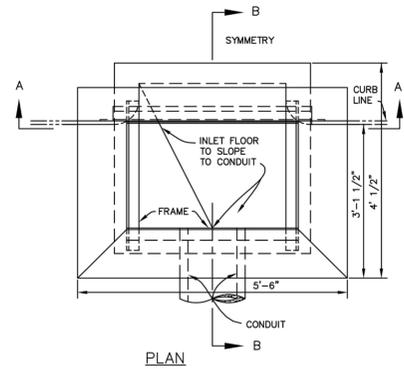
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SHEET NO.  
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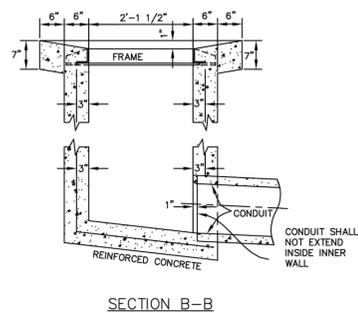
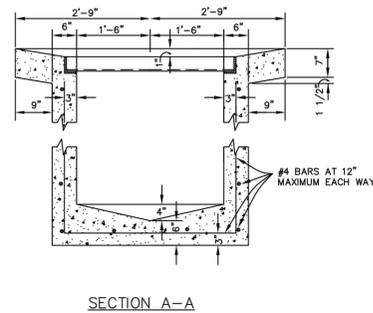
DATE:  
04/01/2024

08 OF 15

DRAWING NAME: Z:\AGS\project\001\001\001\18-003 city of oakland various on call geo\0\_CAD\TRK\_SHEETS\TRK-N-03.dwg  
PLOT DATE: 06-11-24  
PLOTTED BY: arto.hirschner

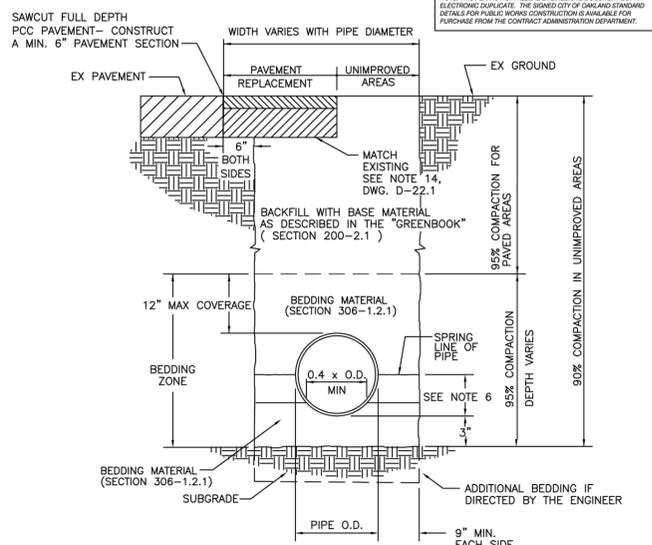


- GENERAL NOTES**
- LOCATION AND DIRECTION OF CONDUITS ENTERING OR LEAVING INLETS TO BE SHOWN ON GENERAL PLANS.
  - GRATE AND FRAME SHALL BE ASSEMBLED AND MADE TO FIT BEFORE DELIVERY.
  - THE GRATE SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH ASTM A-123.
  - ALL BEARING BARS AND CROSS BARS OF GRATE SHALL BE RESISTANCE WELDED OR ELECTROFORGED INTO A ONE PIECE CONSTRUCTION.
  - ALL METAL SHALL BE STRUCTURAL GRADE STEEL IN ACCORDANCE WITH ASTM A-36.
  - A VEE CHANNEL 4" DEEP SHALL JOIN TWO OR MORE CONDUITS ENTERING AN INLET.
  - CONSTRUCT STEPS IN INLETS WITH A DEPTH OF 4" OR GREATER.



NOTE: THIS PLAN IS NOT A LEGAL ENGINEERING DOCUMENT BUT AN ELECTRONIC DUPLICATE. THE SEWERED CITY OF OAKLAND STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION IS AVAILABLE FOR PURCHASE FROM THE CONTRACT ADMINISTRATION DEPARTMENT.

PAVEMENT TYPES				
TYPE A	TYPE B	TYPE C	TYPE D	TYPE F
6" P.C.C. PER SECTION 201-1.1.2	3" A.C. PER SECTION 306-1.5.2	4" A.C. PER SECTION 306-1.5.2	3" A.C. PER SECTION 306-1.5.2	VARIABLE DEPTH A.C. PER SECTION 306-1.5.2
	6" P.C.C. PER SECTION 201-1.1.2			
18" A.B. PER SECTION 306-1.3.1	12" A.B. PER SECTION 306-1.3.1	18" A.B. PER SECTION 306-1.3.1	18" A.B. PER SECTION 306-1.3.1	



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CITY OF OAKLAND DESIGN AND CONSTRUCTION SERVICES DIVISION

**TYPE "D" INLET**

ENGINEERING DESIGN MANAGER: [Signature] DATE: JANUARY 2022 REV. DATE: [Blank] DRAWING: D-6

CITY OF OAKLAND DESIGN AND CONSTRUCTION SERVICES DEPARTMENT

**TRENCH DETAIL**

ENGINEERING DESIGN MANAGER: [Signature] DATE: JANUARY 2022 REV. DATE: [Blank] DWG. NO.: D-22.0

**811** Know what's below. Call before you dig.

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**TYPICAL AC REPLACEMENT SECTION**  
SCALE: NOT TO SCALE

NOTE: MATCH (E)PAVING SECTION, WHICH IS ANTICIPATED TO BE 5.5 INCHES THICK ASPHALT CONCRETE OVER 11 INCHES OF CLASS II AGGREGATE BASE, COMPACTED TO MIN. 95% RELATIVE COMPACTION OR ABOVE OPTIMUM MOISTURE CONTENT AS DETERMINED BY ASTM D1557.

- NOTES:**
- Excavated material shall not be used to fill voids caused by overexcavation; such voids shall be filled with compacted bedding material. Unless directed by the Engineer, no separate payment will be made for overexcavation.
  - Import backfill material shall conform to Subsection 306-1.31
  - Aggregate base shall conform to crushed miscellaneous base (Section 200-2.4) or better. The base material must be approved by the Engineer.
  - The streets of Oakland are generally paved with either AC, PCC, or a combination of the two. The existing pavement may differ from the replacement Pavement Type (A to F) indicated on the plans.
  - Compaction by jetting is not permitted.
  - When flexible pipe (HDPE, etc.) is used, pipe shall be backfilled to the spring line, compacted and backfill tested prior to completing initial backfill.
  - The compacted temporary resurfacing shall be a minimum of 2" thick placed on the required base, and shall be removed prior to placing the permanent paving.
  - Backfill testing is required and results shall be approved by the Engineer prior to paving.
  - No longitudinal joints or seams are allowed in bike lanes. If a longitudinal joint is constructed due to the Contractor's work or this requirement, the Contractor shall remove a minimum of 2" of asphalt from the pavement across the entire bike lane using a method approved by the City and then resurface the bike lane to the Engineer's satisfaction.
  - During backfill operations, the trench shall be backfilled, compacted, and tested to the spring line of any utilities crossing the trench before proceeding with further backfill.
  - Unless specified otherwise, measurement for payment of additional bedding, imported backfill and temporary paving (when listed as separate pay items) shall be based upon the trench widths defined on this detail. The lower trench width for 8" pipe shall be 30".
  - Clean and tackcoat sides of excavation and between paving courses with spray application of SS-1 emulsion before placing asphalt-concrete pavement section.

CITY OF OAKLAND DESIGN AND CONSTRUCTION SERVICES DEPARTMENT

**TRENCH DETAIL**

ENGINEERING DESIGN MANAGER: [Signature] DATE: JANUARY 2022 REV. DATE: [Blank] DWG. NO.: D-22.1

**ROADWAY EDGE STABILIZATION FOR TUNNEL ROAD**

**CITY OF OAKLAND**  
DEPARTMENT OF TRANSPORTATION  
250 FRANK H. OGAWA PLAZA, SUITE 4314 • OAKLAND CA, 94612  
(510) 238-3437 • FAX (510) 238-7227

**AGS, INC.**  
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5 FREELON STREET  
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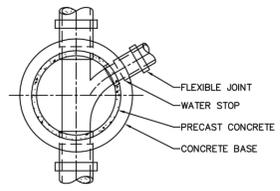


CIVIL ENGINEER	NO.	DATE	BY	REFERENCE
ERIK SCHELLER				
RCE NO. C58638				
CHECKED BY KL				
DESIGNED BY ES				
DRAWN BY AEK				

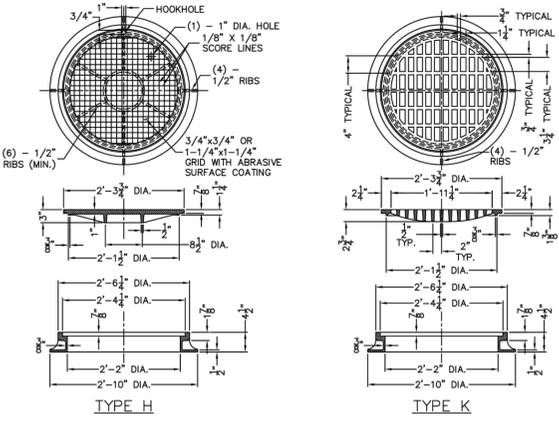
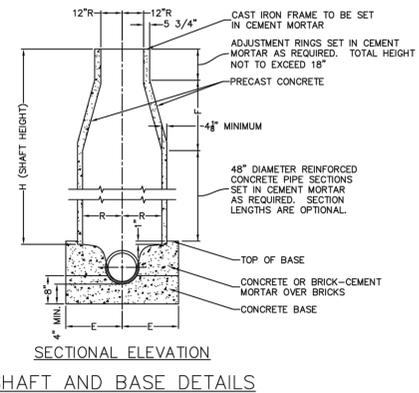
**TUNNEL ROAD CIVIL DETAILS I**

PROJECT NO. **1005104**  
SCALE: AS NOTED  
DATE: 04/01/2024  
SHEET NO. **C-05**  
09 OF 15

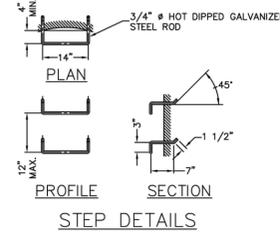
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PLOT DATE: 04/11/24  
PLOTTED BY: ari.krischner



H	R	E	F
3'-6" OR LESS	1'-6"	2'-3"	2'-6" MAXIMUM
OVER 3'-6"	2'-0"	2'-9"	3'-0" MAXIMUM



FRAME AND COVER DETAILS



- GENERAL NOTES**
- FRAMES AND COVERS TO CONFORM TO SECTION 206-3.
  - ALL CONTACT AND BEARING SURFACES OF BOTH FRAME AND COVER SHALL BE MACHINED TO FIT ACCURATELY.
  - TYPE H FRAME AND COVER ARE USED ON MANHOLES IN PUBLIC STREETS, DRIVEWAYS, PATHS, RESERVES AND RIGHTS-OF-WAY AND WHERE INDICATED ON PLANS (TYPE I-H MANHOLES).
  - TYPE K FRAME AND COVER ARE USED ON MANHOLES WHERE INDICATED ON PLANS (TYPE I-K MANHOLES).
  - CONVERSION TO METRIC EQUIVALENTS SHALL BE IN CONFORMANCE WITH ASTM A-380.
  - STEPS SHALL BE 3/4" DIA. HOT DIPPED GALVANIZED STEEL ROD AND OF THE DROP TYPE.
  - THE CONTRACTOR SHALL HAVE THE OPTION TO USE POLYPROPYLENE PLASTIC STEPS IN PRECAST MANHOLES (PS2-PF MANHOLE STEPS MANUFACTURED BY M. A. INDUSTRIES INC. OR APPROVED EQUAL).

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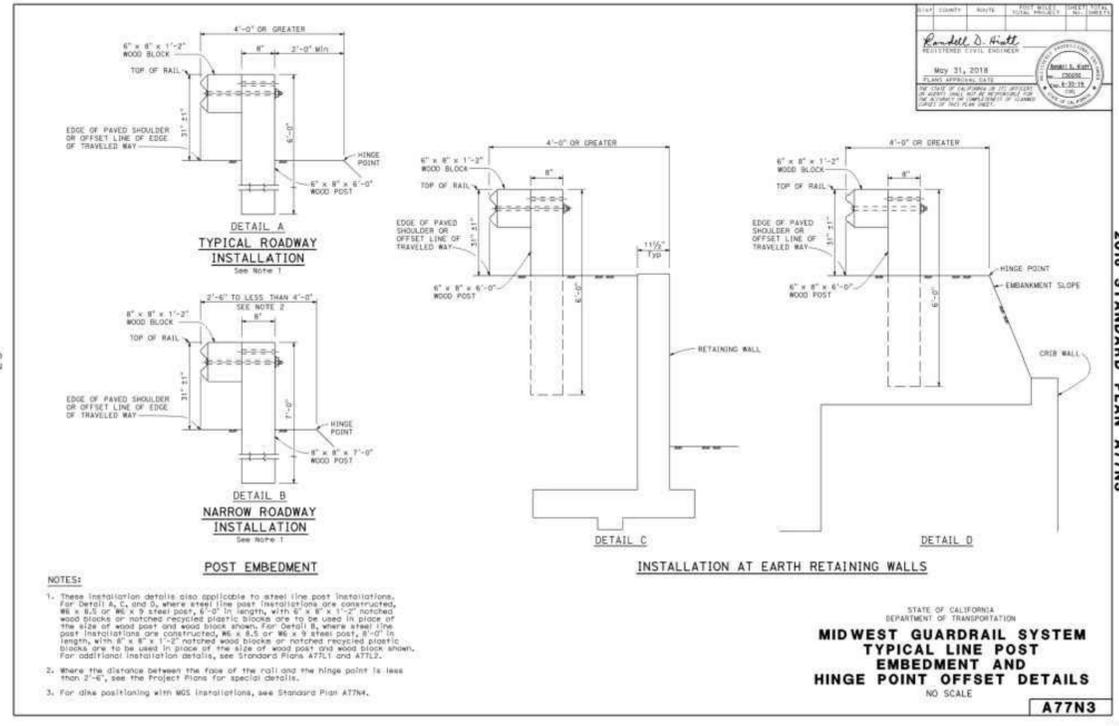
CITY OF OAKLAND

DESIGN AND CONSTRUCTION SERVICES DEPARTMENT

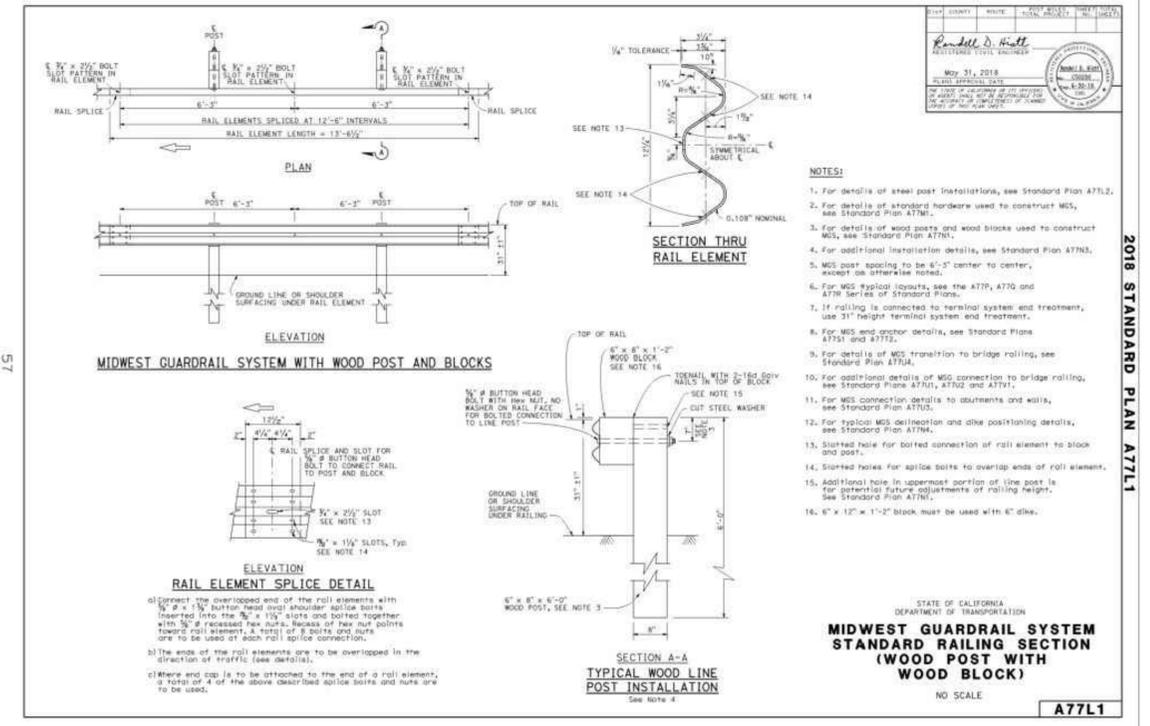


MANHOLE TYPE 1

ENGINEERING DESIGN MANAGER  
DATE: FEBRUARY 2002  
REV. DATE: \_\_\_\_\_  
DRAWING: D-11



2018 STANDARD PLAN A77N3



2018 STANDARD PLAN A77L1



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ROADWAY EDGE STABILIZATION FOR TUNNEL ROAD



CITY OF OAKLAND  
DEPARTMENT OF TRANSPORTATION  
250 FRANK H. OGAWA PLAZA, SUITE 4314 • OAKLAND CA, 94612  
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PHONE: (415) 777-2166  
FAX: (415) 777-4874



CIVIL ENGINEER	NO.	DATE	BY	REFERENCE
ERIK SCHELLER				
RCE NO. C58638				
CHECKED BY KL				
DESIGNED BY ES				
DRAWN BY AEK				

TUNNEL ROAD CIVIL DETAILS II

PROJECT NO.	
1005104	
SCALE:	SHEET NO.
AS NOTED	C-05.1
DATE:	10 OF 15
04/01/2024	

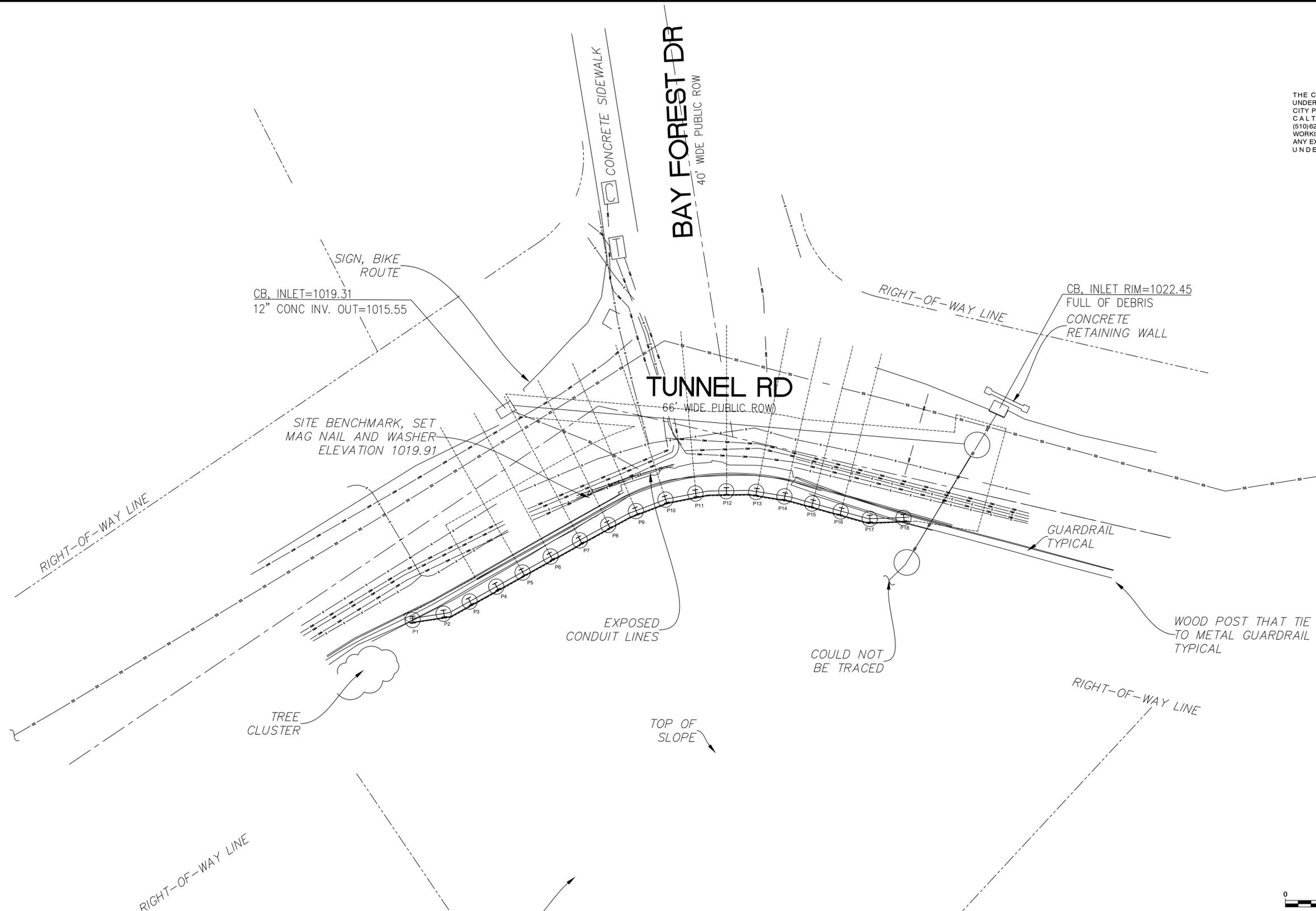
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PLOT DATE: 06-11-24  
PLOTTED BY: atio.linschme





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THE CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT, THE CITY PUBLIC WORKS AGENCY, AND CALTRANS ELECTRICAL AT (510) 622-5741 AT LEAST 48 HOURS (2 WORKING DAYS) PRIOR TO BEGINNING ANY EXCAVATION IN THE VICINITY OF UNDERGROUND FACILITIES.



**ROADWAY EDGE STABILIZATION FOR  
TUNNEL ROAD**



**CITY OF OAKLAND**

DEPARTMENT OF TRANSPORTATION  
250 FRANK H. OGAWA PLAZA, SUITE 4314 \* OAKLAND CA, 94612  
(510) 238-3437 \* FAX (510) 238-7227

STRUCTURE ENGINEER:	AMS DESIGN LLP 4010 MOORPARK AVE SAN JOSE, CA (415) 254 2634	NO.	DATE	BY	REFERENCE
CHECKED BY:	AM				
DESIGNED BY:	SA				
DRAWN BY:	SA				

**TUNNEL ROAD  
& BAY FOREST DRIVE  
SHORING  
PLAN VIEW**

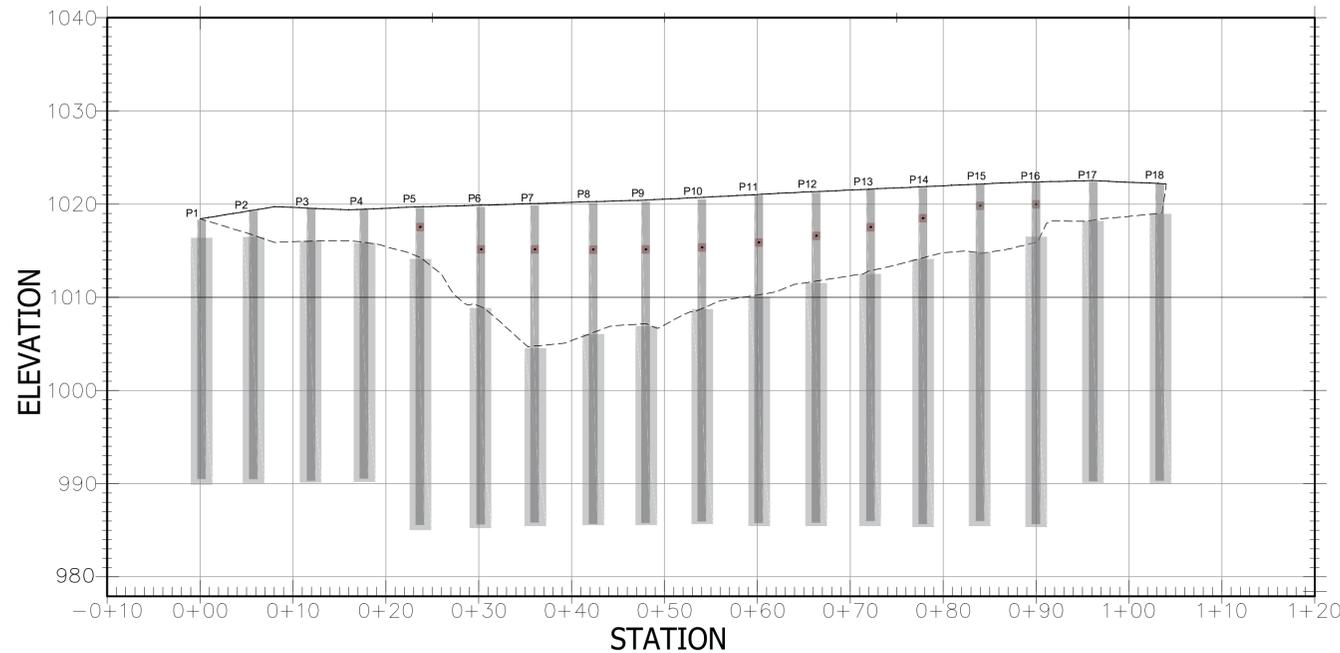
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SCALE: 1" = 10'	SHEET NO. <b>S-01.1</b>
DATE:	11 OF 28

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PLOT BY: Win10



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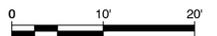
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**NOTES:**

- 1- TIEBACKS SHALL MEET AASHTOO CLASS I PROTECTION REQUIREMENTS.
- 2- THE TIEBACK GROUT SHOULD PENETRATE AT LEAST 10 FEET TO SLIGHTLY WEATHERED SEDIMENTARY BEDROCK
- 3- PLACE 4" DIAMETER WEEP HOLES @ 6'-0" O.C. TO DISCHARGE WATER FROM DRAIN PANELS.
- 4- PILE SPACING IS 6'-0" TYPICAL.
- 5- TIEBACK ANGLE IS 20-DEGREES FROM HORIZON, TYPICAL.
- 6- UNFACTORED DESIGN TIEBACK TENSION LOAD FOR EACH PILE IS SPECIFIED IN THE TABLE. ALL TIEBACKS SHALL BE TESTED FOR THE MINIMUM CAPACITY OF 1.33 TIMES THE DESIGN LOAD FOR THE PERFORMANCE TESTS.
- 7- ALL STEEL SHALL BE HOT DIPPED GALVANIZED. IF WELDING IS NEEDED, PROVIDE COLD GALVANIZATION AT THE AFFECTED STEELS.

SOLDIER PILE SCHEDULE							
PIER ID	STATION	PILE TYPE	MAXIMUM EXPOSED WALL HEIGHT (ft)	TIEBACK ELEVATION FROM THE TOP (ft)	TIEBACK DESIGN LOAD (kips)	BOTTOM OF PIER ELEVATION (ft)	BEAM SIZE
P1	0+00	TYPE 1 (CANTILEVER)	6	NA	NA	990	W14X82
P2	0+06	TYPE 1 (CANTILEVER)	6	NA	NA	990	W14X82
P3	0+12	TYPE 1 (CANTILEVER)	6	NA	NA	990	W14X82
P4	0+18	TYPE 1 (CANTILEVER)	6	NA	NA	990	W14X82
P5	0+24	TYPE 2 (TIEBACK)	15	3	50	985	W14x53
P6	0+30	TYPE 2 (TIEBACK)	15	5	83.5	985	W14X82
P7	0+36	TYPE 2 (TIEBACK)	15	5	83.5	985	W14X82
P8	0+42	TYPE 2 (TIEBACK)	15	5	83.5	985	W14X82
P9	0+48	TYPE 2 (TIEBACK)	15	5	83.5	985	W14X82
P10	0+54	TYPE 2 (TIEBACK)	15	5	83.5	985	W14X82
P11	0+60	TYPE 2 (TIEBACK)	15	5	83.5	985	W14X82
P12	0+66	TYPE 2 (TIEBACK)	15	5	83.5	985	W14X82
P13	0+72	TYPE 2 (TIEBACK)	15	5	83.5	985	W14X82
P14	0+78	TYPE 2 (TIEBACK)	15	3	50	985	W14x53
P15	0+84	TYPE 2 (TIEBACK)	15	3	50	985	W14x53
P16	0+90	TYPE 2 (TIEBACK)	15	3	50	985	W14x53
P17	0+96	TYPE 1 (CANTILEVER)	6	NA	NA	990	W14X82
P18	1+02	TYPE 1 (CANTILEVER)	6	NA	NA	990	W14X82



**ROADWAY EDGE STABILIZATION FOR TUNNEL ROAD**

**CITY OF OAKLAND**  
DEPARTMENT OF TRANSPORTATION  
250 FRANK H. OGAWA PLAZA, SUITE 4314 \* OAKLAND CA, 94612  
(510) 238-3437 \* FAX (510) 238-7227

STRUCTURE ENGINEER: AMS DESIGN LLP 4010 MOORPARK AVE SAN JOSE, CA (415) 254 2634	NO.	DATE	BY	REFERENCE
CHECKED BY: AM				
DESIGNED BY: SA				
DRAWN BY: SA				

**TUNNEL ROAD & BAY FOREST DRIVE SHORING PROFILE VIEW**

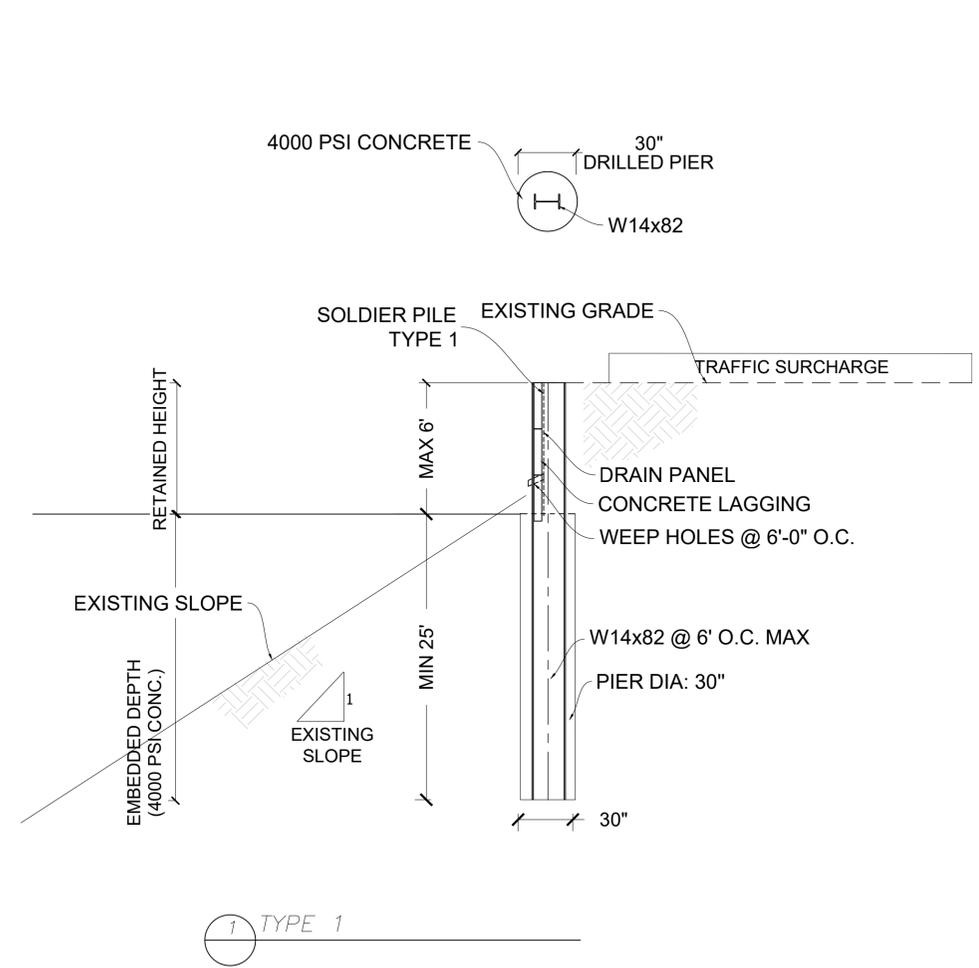
PROJECT NO.  
SCALE: 1" = 10'  
DATE:  
SHEET NO. **S-01.2**  
11 OF 28

PLOTTED BY: Win 10  
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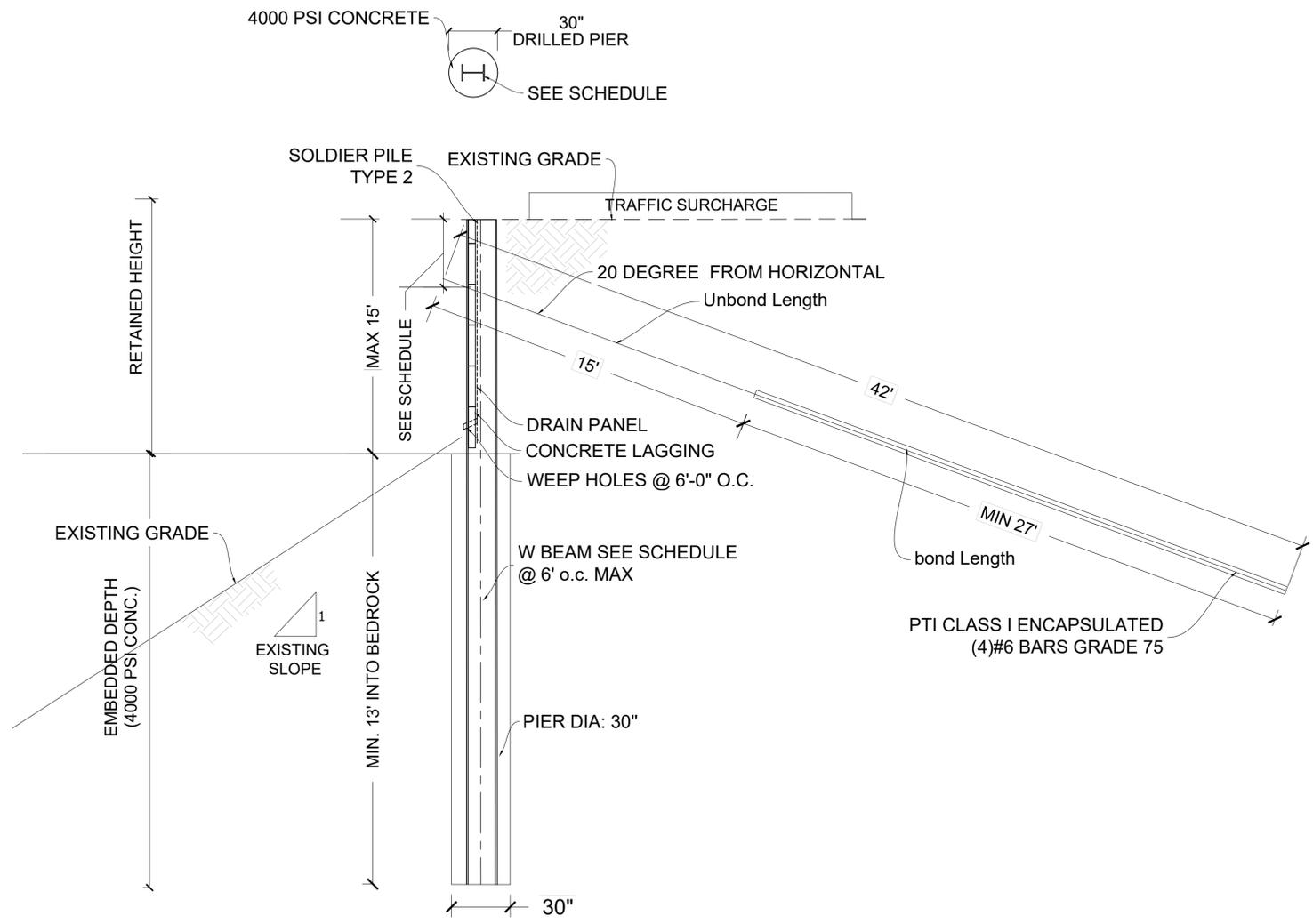


Know what's below.  
Call before you dig.

THE CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT, THE CITY PUBLIC WORKS AGENCY, AND CALTRANS ELECTRICAL AT (510) 622-5741 AT LEAST 48 HOURS (2 WORKING DAYS) PRIOR TO BEGINNING ANY EXCAVATION IN THE VICINITY OF UNDERGROUND FACILITIES.



1 TYPE 1



2 TYPE 2



**ROADWAY EDGE STABILIZATION FOR TUNNEL ROAD**



**CITY OF OAKLAND**  
DEPARTMENT OF TRANSPORTATION  
250 FRANK H. OGAWA PLAZA, SUITE 4314 \* OAKLAND CA, 94612  
(510) 238-3437 \* FAX (510) 238-7227

STRUCTURE ENGINEER:	NO.	DATE	BY	REFERENCE
AMS DESIGN LLP 4010 MOORPARK AVE SAN JOSE, CA (415) 254 2634				
CHECKED BY: AM				
DESIGNED BY: SA				
DRAWN BY: SA				

**TUNNEL ROAD & BAY FOREST DRIVE STRUCTURAL SECTIONS**

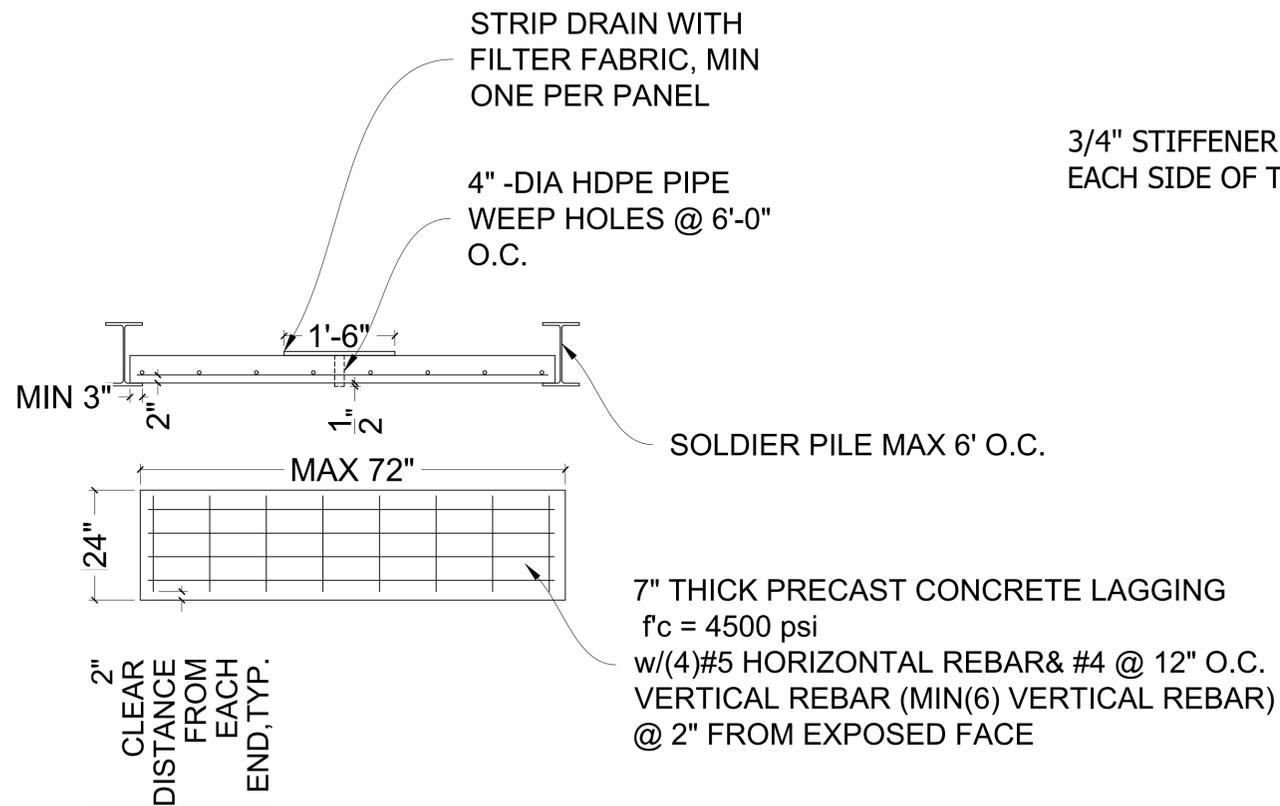
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SCALE: AS NOTED	SHEET NO. S-02.1
DATE:	12 OF 28

DRAWING NAME: C:\Users\Win 10\AMS Design Office\Dropbox\AMS Office\Structure\05 - Projects\AGS\Tunnel Road\02 - Internal\02 - Work space\Tunnel Road\CITY OF OAKLAND STANDARD PAGE\AMS DESIGN-99P.dwg  
PLOT DATE: 06-10-24  
PLOT BY: Win 10

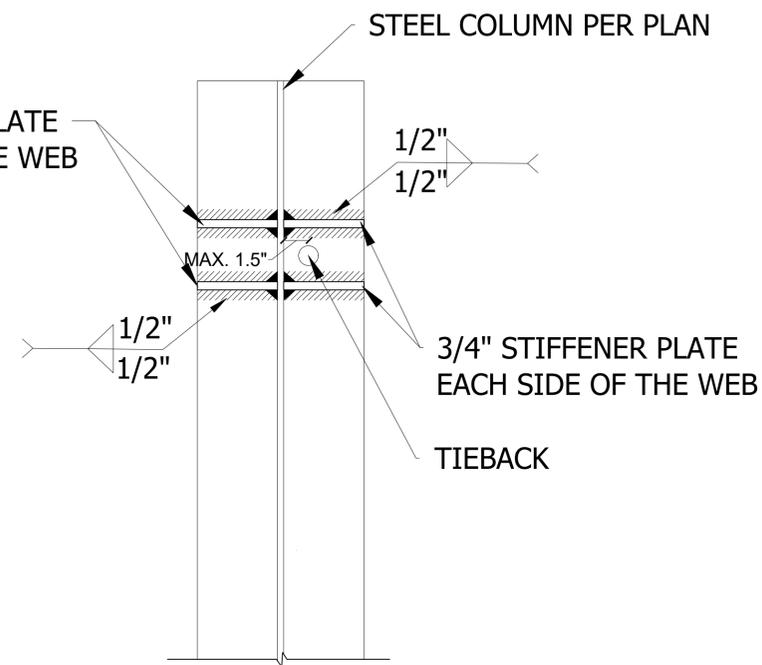


Know what's below.  
Call before you dig.

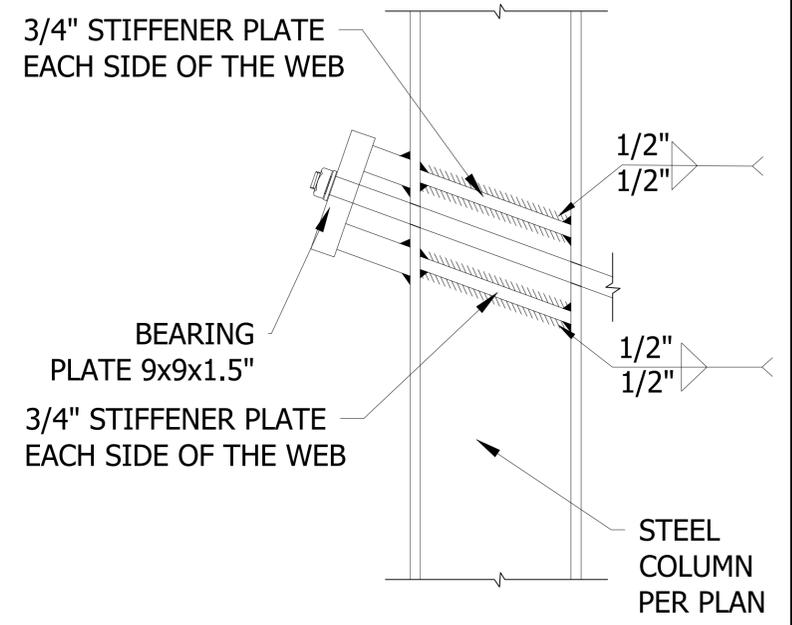
THE CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT, THE CITY PUBLIC WORKS AGENCY, AND CALTRANS ELECTRICAL AT (510)822-5741 AT LEAST 48 HOURS (2 WORKING DAYS) PRIOR TO BEGINNING ANY EXCAVATION IN THE VICINITY OF UNDERGROUND FACILITIES.



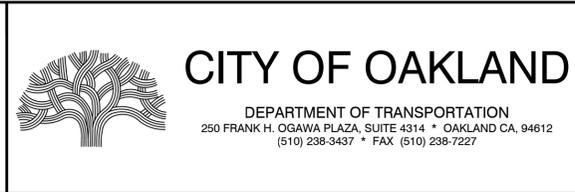
1 CONCRETE LAGGING



2 ANCHOR WEB STIFFENER



ROADWAY EDGE STABILIZATION FOR TUNNEL ROAD



STRUCTURE ENGINEER:	NO.	DATE	BY	REFERENCE
AMS DESIGN LLP 4010 MOORPARK AVE SAN JOSE, CA (415) 254 2634				
CHECKED BY AM				
DESIGNED BY SA				
DRAWN BY SA				

TUNNEL ROAD & BAY FOREST DRIVE STRUCTURAL DETAILS

PROJECT NO.	
SCALE: AS NOTED	SHEET NO. S-02.2
DATE:	13 OF 28

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 PLOTTED BY: Win 10